

In the Claims

1-19. (cancelled)

20. (currently amended) A method of making a sensor, comprising the steps of:
providing a substrate;

providing at least one opening in the substrate that extends from a first outermost surface to a second outermost surface of the substrate;

placing an electrode proximate to the at least one opening; and

contacting a dry ionomer membrane to the substrate and electrode;

wherein, the ionomer membrane is dry during the steps of providing the at least one opening in the substrate, placing the electrode proximate to the at least one opening, and contacting the dry ionomer membrane to the substrate and electrode.

21. (previously presented) The method of claim 20 further comprising the step of aligning the at least one opening in the substrate with the electrode for defining a gas passage.

22. (cancelled)

23. (previously presented) The method of claim 20 further comprising the step of positioning a polymer layer upon the electrode for slowing inputs of gas moving through the at least one opening onto a surface of the electrode.

24. (previously presented) The method of claim 20 where the step of providing a substrate further includes positioning a counter electrode in contact with the dry ionomer membrane such that upon wetting the dry ionomer membrane the counter electrode provides an electrical connection.

25. (previously presented) The method of claim 20 where the step of providing a substrate further includes positioning a reference electrode in contact with the dry ionomer membrane such that upon wetting the dry ionomer membrane a reference point is created against which the potential of other electrodes can be measured.

26. (previously presented) The method of claim 20 where the step of providing a dry ionomer membrane further includes obtaining a perfluorosulfonic acid membrane.

27. (previously presented) The method of claim 20 further comprising the step of providing a reservoir in contact with the dry ionomer membrane.

28. (previously presented) The method of claim 27 further comprising the step of filling the reservoir with a liquid.

29. (previously presented) The method of claim 20 further comprising the step of forming at least one hole in the dry ionomer membrane.

30. (previously presented) The method of claim 29 further comprising the step of aligning the at least one hole with the electrode for defining a gas passage.

31. (currently amended) A method of making an electrochemical sensor, comprising the steps of:

- providing a substrate;

- placing an electrode on the substrate;

- contacting a dry ionomer membrane to the substrate and electrode;

- providing a hole in the dry ionomer membrane proximate to the electrode;

extending an opening in the substrate from a first outermost surface to a second outermost surface; and

wherein, the ionomer membrane is dry during the steps of providing the at least one opening in the substrate, placing the electrode proximate to the at least one opening, and contacting the dry ionomer membrane to the substrate and electrode.

32. (previously presented) The method of claim 31 further comprising the step of aligning the at least one hole in the dry ionomer membrane with the electrode.